



**APPLICATION FOR
UNITED STATES LETTERS PATENT FOR**

AN ELECTRONIC PAYMENT INTERCHANGE CONCENTRATOR

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Abstract

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INVENTOR:

David L. James, a citizen of the United States of America

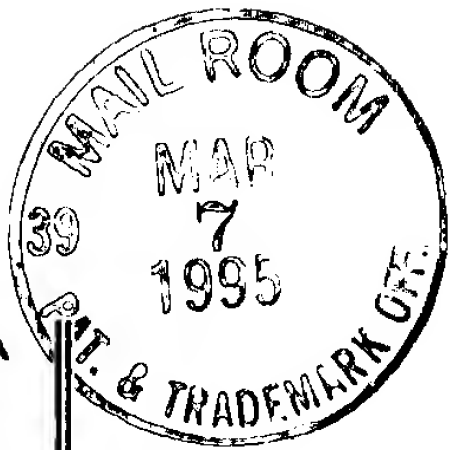
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PORTER, WRIGHT, MORRIS & ARTHUR

41 South High Street

Columbus, Ohio 43215

(614) 227-2000 or (800) 533-2794



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APPLICATION FOR UNITED STATES LETTERS PATENT

FOR AN

ELECTRONIC PAYMENT INTERCHANGE CONCENTRATOR

1 FIELD OF THE INVENTION

2 The present invention relates to the processing of financial instruments among banks and
3 similar institutions. More particularly, the present invention provides a means for translating
4 dissimilar data file formats containing financial instrument information between participating
5 financial institutions. The information is received from an originating institution in one of a plurality
6 of industry data file formats, translated to a data file format selected by the institution that is to
7 receive the information, and transmitted to the receiving institution. Thus, a turn-key system is
8 provided allowing multilateral exchanges between and among a plurality of institutions having
9 different transmitting and receiving formats.

10 DESCRIPTION OF RELATED ART

11 In the prior art, to effect the clearing and/or transfer and settlement of financial instruments
12 such as a check, financial institutions must either typically transport the instrument to the payor's
13 bank physically or submit the instrument into a settlement clearing system, local clearing houses or
14 more sophisticated national clearing houses such as that described in the present assignee's United

1 States Letters Patent No. 5,265,007. A bank, which has received an instrument on behalf of a payee
2 (bank of first deposit), presents the instrument either directly to the drawer's bank for payment or
3 introduces the instrument into a mechanism in the appropriate payment system. Bilateral or multi-
4 party agreements are entered into between each bank of first deposit and each payor bank in order
5 to facilitate settlement between and among the participants. Delays in check processing,
6 transportation, settlement and subsequent availability of funds are frequently associated with
7 conventional processing. Alternatively, electronic settlement and presentment is faster; however,
8 certain obstacles must be overcome to enable electronic settlement between or among participating
9 institutions, namely the installation of requisite and costly hardware and software systems to
10 facilitate associated electronic transmissions.

11 Financial institutions which exchange financial instrument information electronically must
12 communicate data in the same data file formats. Several distinct formats are currently used to
13 process financial instrument transactions, such as payment of checks, electronically. An originating
14 institution in receipt of a check deposited by a customer transmits data derived from Magnetic Ink
15 Character Recognition (MICR) line codes from the check, including the check amount, account
16 number, serial number and routing transit number, and/or other information, in one of several
17 standardized formats. If the format required by the receiving (payor) institution is different,
18 dedicated software is required to translate the originator's file into a format readable by the receiving
19 institution. If this is the case, substantial monetary investment is required to provide both hardware
20 and software capabilities at the originating and/or receiving institution to allow the exchange of

1 electronic check data if different data formats are involved with respect to the receiving or
2 originating institutions. Usually, institutions using different formats do not communicate on a
3 bilateral basis.

4 By way of example, a first depository bank (customarily the payee's bank) in receipt of a
5 check from one of its customers may desire to send electronic data files in a standard electronic
6 format such as the Federal Reserve's Electronic Cash Letter (ECL) format to the drawer's bank (*i.e.*,
7 the payor bank). However, if the payor bank upon which the check is drawn is capable only of
8 receiving data files in the Automated Clearing House (ACH) format, the two institutions are
9 incapable of exchanging check MICR line data and engaging in bilateral settlements. When either
10 the payee or payor bank is a small institution or an institution that otherwise does not process a high
11 volume of checks, these institutions cannot attain the efficiencies of speed and funds availability
12 associated with bilateral electronic exchanges. A substantial software investment is necessary in this
13 instance. If a bank did invest to provide this capability, the increased costs associated with
14 recoupment of the investment would increase operational costs, a commercial undesirability.

15 **OBJECTS OF THE INVENTION**

16 Accordingly, it is an object of the present invention to enable the exchange of financial
17 instrument information between and among multiple institutions for processing when the data file
18 formats utilized by the institutions are dissimilar.

1 It is also an object of the present invention to provide a system which simplifies and
2 expedites the electronic exchange of financial instrument information between a plurality of
3 institutions.

4 Another object of the present invention is to provide a system which allows financial
5 institutions to receive information representing various financial instruments from multiple
6 institutions originating in a variety of standard data file formats, but received by a receiving
7 institution in a selected format determined by the receiving institution.

8 An object of the present invention is to provide a system which receives information
9 representing financial instruments in a first data file format from a financial institution and translates
10 the data into a format acceptable to one or more of a plurality of settlement mechanisms.

11 Another object of the present invention is to provide a system which allows financial
12 institutions to receive information, derived from financial instruments, from multiple institutions
13 originating in a variety of standard data file formats, but received by a receiving institution in a
14 selected format determined by the receiving institution.

15 Another object of the present invention is to provide a system which allows financial
16 institutions to receive information, derived from financial instruments, from multiple institutions
17 originating in a variety of standard data file formats, and transmitted to one or more of a plurality
18 of settlement mechanisms in a format acceptable to each mechanism.

19 It is a further object of this invention to provide a system which allows financial institutions
20 to receive electronic information representing check MICR line and/or other data, or data

1 representing an electronic funds transfer, from multiple institutions originating in a variety of
2 standard data formats, but received by a receiving institution in a selected format determined by the
3 receiving institution.

4 Another object of the present invention is to provide a system which receives check MICR
5 line and/or other or additional data in a first data file format from a financial institution and translates
6 the data into a format acceptable to one or more of a plurality of settlement mechanisms.

7 Another object of the invention is to provide a permanent memory storage device which
8 archives financial instrument information exchanged between originating and receiving institutions.

9 An object of the present invention is to provide a system which allows an originating
10 institution to transmit a data file containing information representing a plurality of financial
11 instruments to be exchanged between the originating institution and one or more receiving
12 institutions, separating and translating the first data file into one or more data files and data file
13 formats corresponding to each of the designated receiving institutions, and transmitting the separated
14 and translated data files to each of the receiving institutions.

15 A still further object of the present invention is to provide an integrated system which allows
16 financial institutions to receive electronic information representing financial instruments from a
17 plurality of institutions originating in a variety of standard data formats, translating the information
18 into a second data format selected by the receiving institution, storing the second data format and
19 information contained therein in a memory storage address uniquely accessible to a specific
20 receiving institution, providing a means for a receiving institution to access such stored data,

1 transmitting the data to the receiving institution, and providing an archival memory storage device.

2 An integrated system is provided which allows financial institutions to receive financial instrument
3 information in a data file from multiple institutions originating in a variety of standard data formats.

4 The information is translated into a data format selected by the institution that is to receive the
5 information and the financial instrument information is transmitted to one or more of a plurality of
6 settlement mechanisms.

7 The present invention also provides a process which allows institutions to receive financial
8 instrument information from multiple institutions originating in a variety of data formats, to translate
9 the data into a format specified by the institution that is to receive the information, to store the
10 information contained in the data file in a memory storage address uniquely accessible to a specific
11 receiving institution, to provide a means for the receiving institution to access the stored data, and
12 to transmit same to the receiving institution.

13 It is yet another object of the present invention to avoid strict timing requirements in that
14 both originating and receiving institutions are provided an ability to unilaterally determine the timing
15 of sending and/or receiving financial instrument information within the system rather than be bound
16 by a strict schedule.

17 SUMMARY OF THE INVENTION

18 The foregoing objectives are achieved in an electronic payment interchange concentrator
19 system for effecting one or more of the reception, transmission, translation and storage of data files

1 containing information relating to financial instruments among and between multiple institutions.
2 The invention includes a means for receiving a data file from an originating institution. The data file
3 is in a first file format established by the originating institution and contains a designation that the
4 information in the data file is to be received by a predetermined institution or institutions. The data
5 file may contain co-mingled financial instrument information, portions of which are intended for one
6 or more of a multiple of receiving institutions or settlement mechanisms. A processor translates the
7 financial instrument information in the first data file format into a second data file format selected
8 by each institution that is to receive the information. Also included is a means for storing the
9 financial instrument information in the second data file format in memory which is uniquely
10 accessible to each institution that is to receive the information. The system also includes a means
11 for transmitting the financial instrument information in the second data file format to the institution
12 that is to receive the information upon one of demand from the receiving institution, instructions by
13 the originating institution and within a prearranged time period.

14 These and further objectives will become apparent from the following description.

15 **BRIEF DESCRIPTION OF THE DRAWINGS**

16 **Figure 1** is a simplified illustration showing a data file format translator in a bilateral
17 relationship of two clearing banks with regard to an instrument presented for payment, and one or
18 more possible settlement mechanisms.

1 **Figure 2** illustrates multiple participating financial institutions; the electronic payment
2 interchange concentrator ("EPIC"); the translation of a data file containing financial instrument
3 information from a first file format established by an originating institution to a second file format
4 established by a receiving institution; a memory storage area within EPIC accessible to a specific
5 originating and/or receiving institution; the transmission of the second file format to the receiving
6 institution; the optional transmission of information to a settlement mechanism; and an archival
7 mechanism for permanently storing the financial instrument information.

8 **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT(S)**

9 A system is provided that expedites the processing of financial instrument information by
10 (1) receiving an electronic data file containing financial instrument information from an originating
11 institution; (2) translating the data file format received from the originating institution into a format
12 established by the institution that is to receive the information; (3) transmitting the reformatted data
13 file to the receiving institution; and (4) providing an archival facility to store the financial instrument
14 information. In contrast with bilateral translation systems, the invention provides for the exchange
15 of information among multiple institutions in different formats in a system which is adapted to
16 deliver translated files in differing formats to different receiving institutions, and further to include
17 in the files additional information that is useful in the settlement and reconciliation of exchanged
18 information. The present invention also communicates with existing clearing and settlement

1 mechanisms to expedite the clearing of the financial instruments represented by the information in
2 the data file and the settlement of funds represented by the financial instruments.

3 The electronic payment interchange concentrator, EPIC, allows financial institutions to
4 receive electronic information such as usually associated with categories appearing in check MICR
5 line data, representing financial instruments and electronic funds transfers, and additional system
6 generated information such as trace number, bank of first deposit, account deposited to, and the like,
7 from a variety of sources originating in a plurality of industry data file formats. EPIC translates the
8 information sent by the originating institution(s) into a format selected by the receiving institution.
9 EPIC provides individual memory storage for each receiving institution which allows retrieval of
10 financial instrument information on a timely basis by the receiving institution according to clearing
11 requirements or options determined by the institution.

12 Many financial institutions are now capable of transmitting and receiving data files, however
13 they are not usually capable of exchanging data files in a plurality of different file formats associated
14 with other institutions. As a result of the present invention, institutions can exchange financial
15 instrument information notwithstanding that neither institution has the capability with regard to an
16 exchange of information to process that information in the data file format in which it is received.
17 The present invention is a turn-key system that allows institutions to utilize existing sending and
18 receiving systems to communicate with multiple financial institutions and/or settlement mechanisms
19 having different file format protocols without changing or investing in new software and hardware

1 systems. The system reduces the complexities of timing and technical arrangements usually
2 involved in bilateral and multilateral exchanges.

3 References herein to financial instrument information contained in a data file are intended
4 to encompass physical items such as checks, paper cash items, money orders, share orders, drafts and
5 other physical instruments as well as electronic funds transfers. Hence, the term "check" is also
6 intended to include these items. Moreover, the Federal Reserve System's standard definition of a
7 "cash item" is incorporated by reference herein.

8 Figure 1 illustrates originating institution O1 and a translator 1. A communication link 11
9 is established between the originating institution's central processing unit (CPU) (not shown) that
10 maintains electronic data files of financial instruments processed at the originating institution and
11 sent to the translator. The link facilitates the transfer of data files containing financial instrument
12 information. Translator 1 receives the data file which contains information relating to financial
13 instrument information to be exchanged between originating institution O1 and a receiving
14 institution R1.

15 The data file received by the translator is arranged in a first format. Conventionally, data file
16 transmission is based on a file structure and format. The file structure comprises a plurality of
17 header, detail and trailer records. Each record contains data fields having a unique address wherein
18 a character or number is stored. The file format specifies the arrangement of information within
19 individual data fields or ranges of data fields within a particular record. For example, data fields 1
20 through 30 in a header record may contain the name of the originating institution. Similarly, data

1 fields 1 through 20 in the first detail record may contain the amount (e.g., the dollar value) of the
2 financial instrument being exchanged. As a result, a receiving institution, if unable to process the
3 particular format utilized by the originating institution is incapable of receiving information or of
4 receiving that information accurately.

5 In the United States banking industry, several data file formats are used to transfer financial
6 information between and among institutions and settlement mechanisms. By way of example,
7 among the common formats are: Electronic Check Presentment (ECP), Automated Clearing House
8 (ACH), and Electronic Cash Letter (ECL). Although standardized, these formats are incompatible
9 with one another. Consequently, an originating institution may have a singular capability to transfer
10 data in a first file format. However, if a financial institution which is to receive this information does
11 not have processing capabilities compatible with this format, the originating and receiving
12 institutions are incapable of communicating with regard to information contained in the data files.

13 The present invention resolves this problem. The system validates identifying information
14 contained in the data file with respect to the originating institution and the receiving institution
15 designated by the originating institution to insure that both are system participants. The identifying
16 information ensures: (a) the originating institution is authorized to access the system; (b) the
17 intended receiving institution is recognized by the system; and (c) the receiving institution's selected
18 data file format is one which the system acknowledges.

19 A processor, within translator 1, employing data processing and signal generation
20 procedures, translates the first data file format received from originating institution O1 into a second

1 data file format selected by the institution that is the intended recipient of the financial instrument
2 information R1. Security procedures are utilized to limit only authorized originating and receiving
3 institutions to effect one or more of the reception, transmission, translation and storage of the
4 financial instrument information contained in the data file. Procedures are also used to authenticate
5 information contained in the first data file format with respect to predetermined data format
6 parameters. This includes validating that the data file submitted by the originating institution is in
7 a format which the system recognizes; that the data fields with respect to items in the file are
8 accurate according to format parameters; and that the minimum amount of information required to
9 successfully translate the file is present whether the information is to be transmitted to a receiving
10 institution or to one or more settlement mechanisms. (Some formats have optional fields that are
11 not "necessary" for the purposes herein.)

12 In the preferred embodiment, the receiving institution determines the data file format in
13 which it desires to receive the financial instrument information. (As explained above, a specific data
14 file format has associated with it a particular arrangement of information within individual data
15 fields dependent upon the format utilized (ACH, ECP, etc.)). The information contained in the data
16 file is authenticated to ensure that the data arrangement corresponds to the parameters associated
17 with the format utilized.

18 In the simplified example of Figure 1, originating institution O1, a bank of deposit of a
19 financial instrument, transfers a data file containing information about that instrument in the ECP
20 data file format to translator 1 through communication link 11 and specifies receiving institution R1

1 as the intended recipient thereof. The receiving institution's selected data file format is ACH. The
2 translator receives the first data file format (ECP), recognizes that R1 is the receiving institution and
3 that R1 has selected a second data file format (ACH) in which it is capable of receiving information.
4 Using a logical sequence of data interpretation and signal generation steps, translator 1 translates the
5 ECP information from O1 into the ACH format to be received by R1 by way of the communication
6 link 12 between the translator and R1. The paper check is presented to R1 by direct physical
7 transport or clearinghouse mechanism 8 from O1. The processing of the funds representing the
8 physical instrument may be effected by way of settlement mechanism 16, to which the translated
9 data is also sent, as shown by the dashed lines 15 in Figure 1. The funds represented by the physical
10 instrument may also be exchanged between originating institution O1 and R1 directly as illustrated
11 by path 14.

12 In a multiple institution application, a single data file transferred by an originating institution
13 to the translator in a first file format may contain co-mingled financial instrument information
14 intended for multiple receiving institutions. The single data file includes separate and unique header
15 records for instruments associated with each receiving institution. Upon receipt of this data file, the
16 system determines which financial instrument information is intended for a receiving institution and
17 translates that information to a different format selected by that particular receiving institution. In
18 this manner, an originating institution can transfer one data file containing information intended for
19 a plurality of receiving institutions. The system translates and compiles the information consistent
20 with the second data file format selected by each receiving institution.

1 A memory storage mechanism that is uniquely accessible to a particular receiving institution
2 is included in the system. An institution may receive several files representing financial instrument
3 information from many originating institutions at different times during a typical business day. The
4 receiving institution, however, may not need access to this information at the particular time it is sent
5 and translated into the second data file format. Accordingly, the information is stored in memory
6 allocated exclusively to that particular receiving institution enabling it to retrieve the financial
7 instrument information upon demand, at a predetermined time, based on instructions submitted by
8 the originating institution, or within a prearranged time period. Storage devices such as magnetic
9 tape, CD ROM, or other readable means may also permanently store the financial instrument
10 information for archival or audit purposes.

11 Having translated and processed the data file formats, the system is also capable of
12 transmitting the information contained within the files to one or more of a plurality of mechanisms
13 for settlement purposes. This transfer to a settlement mechanism may be based on instructions from
14 either the originating institution O1 or receiving institution R1. The receiving or originating
15 institution has the capability to designate a preferred settlement mechanism through which to settle
16 funds represented by the financial instruments as a standard procedure. A typical settlement
17 mechanism or check clearing system accessible from EPIC is described in United States Letters
18 Patent No. 5,265,007, Barnhard, *et al.* (The assignee of this patent is also the assignee of the present
19 invention). This feature facilitates the expedited settlement and clearing of funds represented by the
20 information contained in the data files between originating and receiving institutions.

1 The present invention thus includes a system for effecting one or more of the reception,
2 transmission, translation and storage of data files containing financial instrument information
3 between and among multiple institutions. The system is illustrated, by way of example, in Figure
4 2 in which originating institutions, or the banks of first deposit, O1, O2....ON are in receipt of
5 numerous checks from their customers or other institutions drawn on different receiving institutions
6 (payor banks) R1, R2....RN. In the prior art, the bank of first deposit would physically prepare a
7 cash letter representing the physical checks 17 and their respective amounts drawn on each of banks
8 R1, R2....RN, physically deliver and present the checks directly to the payor banks or through
9 clearinghouse 17. Funds represented by the checks are settled from the receiving institution by-way
10 of settlement mechanism 31, as referenced by path A, and/or directly from the receiving institution
11 to the originating institution as referenced by path B.

12 Alternatively, if the banks of first deposit O1, O2....ON and payor banks R1, R2....RN
13 communicate using the same data file format, then the banks of first deposit may prepare a data file
14 containing financial instrument information in the common data file format, transmit the file to the
15 appropriate institution and await settlement. Finally, if an automated settlement system is utilized
16 and all the parties communicate using the same data file format, then the banks of first deposit O1,
17 O2....ON, and payor banks R1, R2....RN communicate through the selected automated system.
18 However, if the originating and receiving institutions or the originating institution and the settlement
19 system do not utilize the same data file format, communication between and among them is
20 impossible.

1 The present system enables the originating institutions O1, O2....ON to transfer a data file
2 in a first file format (ACH, ECL, etc.) containing financial instrument information to the system via
3 communication links referenced generally at 11a, 11b, 11n. Security procedures are provided which
4 limit only authorized originating and receiving institutions to effect one or more of the reception,
5 transmission, translation and storage of the data files within the system. This ensures that the
6 originating institutions O1, O2....ON and the receiving institutions R1, R2....RN are authorized to
7 access the system, as well as preventing misappropriation of financial information contained in the
8 data files by non-authorized parties. A further data validation protocol is provided to verify that the
9 minimum amount of information to facilitate translation and transfer between the originating and
10 receiving institutions, or from the originating and receiving institutions to one or more settlement
11 mechanisms, is present in the data file. The system's master processor 21 identifies and segregates
12 the information designated for each of the receiving institutions from each file received.

13 Based on the data file format selected by each receiving institution, master processor 21,
14 according to a file format translation protocol, translates the data file received from each of the
15 originating institutions O1, O2,...ON, into a second data file format selected by each of the receiving
16 institutions R1, R2,...RN. The information contained in the data file which is intended for each
17 receiving institution is stored in memory M23, M24....MN uniquely allocated to each receiving
18 institution R1, R2....RN respectively. Such allocated memory can be provided in the system before
19 or after the translation function. Most originating institutions maintain on site back-up of
20 information transmitted. Communication links, referenced generally at 12a, 12b, 12n, enable each

1 receiving institution to retrieve the information contained in the data files from memory M23,
2 M24....MN upon demand, based on instructions by the originating institution(s) or within a
3 prearranged time period. The present system also includes communication link 30 for transmitting
4 all or a portion of the information contained in the data file to one or more of a plurality of settlement
5 mechanisms referenced generally at 31. Archival memory 25 is provided for audit purposes and
6 preserves financial instrument information exchanged between originating and receiving institutions
7 as well as information transmitted to settlement mechanisms. The communication links 11a, 11b,
8 11n and 12a, 12b, 12n are typically bi-directional to allow return transmissions such as confirmation
9 of receipt and communication in general to and from the institutions and the system.

10 Each originating institution O1, O2....ON transfers data files to the system which contain
11 multiple header, detail, and trailer records for several receiving institutions R1, R2....RN. This
12 allows the originating institution to transfer a single file to EPIC and communicate with several
13 receiving institutions utilizing multiple data file formats.

14 By way of example, originating institution O2 determines a first file format, such as ACH,
15 in which it will transfer a single data file containing co-mingled financial instrument information to
16 the system with the intended recipients as receiving institutions R1 and R2 which have selected to
17 receive data files, for example, in the ECL and ECP formats respectively. The system segregates
18 the received ACH information designated for each receiving institution; translates the segment of
19 the ACH data file into the ECL format for receiving institution R1; translates the ACH segment of
20 the data file into the ECP format for receiving institution R2; and stores each translated data file in

1 separate memory categories M23 and M24 uniquely accessible by receiving institutions R1 and R2
2 respectively. The receiving institutions can retrieve information contained in the data files through
3 communication links 12a and 12b upon demand, based on instructions by the originating institution
4 or within a prearranged time period.

5 An originating institution may customize a sending file format(s) to include unique routing
6 rules and to generate sender/receiver screen inputs for various settlement mechanisms. This
7 information is contained within a specific record in an originating institution's data file. An
8 originating institution may also determine acceptable file end points which satisfy predetermined
9 receiver rules, direct storage of a file for retrieval, and allow access to screens displaying the status
10 of files sent and received. Likewise, a receiving institution may customize its file formats to include
11 unique sender rules that identify the sender and the format and/or category content of the file
12 information being sent. The receiving institution may also sign on as a valid participant and
13 acknowledge receipt of such files by transmitting a confirmation to the system and/or to a settlement
14 mechanism. Typically, the data files exchanged between originating institutions, receiving
15 institutions and EPIC include a file header record, a cash letter header record and a trailer record.
16 The file header record may include one or more of an originating institution identification, a format
17 key, date, time, rejection code and associated reason. Optimum operation of the system requires that
18 minimum information be included in the cash letter header for all formats received. This
19 information may include, among other information, originating institution identification, settlement
20 instructions, a format key, date, time, a receiver key, trace block information, and cash letter

1 identification information. If the format is improper, a rejection code, associated reason and other
2 information may be generated. Less, more and/or other types of information may comprise the
3 required cash letter header record.

4 On occasion, a financial instrument such as a check is returned to an institution of first
5 deposit, usually a bank, based on insufficient funds in the drawer's account, forgery, stop payment,
6 dishonor, or other reasons. The bank of first deposit may, in some situations, be the originating
7 institution referenced herein. Presently, the physical instrument is needed to determine the account
8 number of the payee at the institution of first deposit in order to reverse the credit of funds. This
9 requires increased labor and processing costs.

10 The system solves this problem by providing an optional field in the appropriate data file
11 detail record which records the account number of the payee at the bank of first deposit. Thus, in
12 the data associated with this embodiment, the payor or receiving institution can quickly determine
13 which account at the institution of first deposit should be reversed. Similarly, the account number
14 of the payee at the institution of first deposit may also be transmitted to the selected settlement
15 mechanism, thereby providing a means for timely reversal of funds. Accordingly, a detail record
16 included in the data file may contain specific information including an originating bank
17 identification, a bank of first deposit identification, and an account number associated with the bank
18 of first deposit to which the funds were transferred. If a check is exchanged, the detail record also
19 includes full MICR line information (separate fields), a sender bank trace number, a bank of first
20 deposit trace number, an "also known as" (AKA) trace number, an image location, a physical

1 document location, one or more filler fields, a return code, and a photo request code as this
2 information is known in the industry. The cash letter trailer record may include an originating
3 institution identification, a record count, a dollar hash total, and filler fields. The trailer file record
4 includes total cash letter count, total detail record count, dollar hash totals, and filler fields.
5

6 Thus, the system described herein increases the number of institutions which can exchange
7 financial instrument information and the speed of the exchange, while reducing the expense thereof,
8 by providing a common central facility which translates information contained in a first data file
9 format transferred by an originating institution into a second data file format selected by the
10 institution that is to receive the information. Previously, institutions which desired to exchange
11 financial instrument information among and between themselves were required to enter into multiple
12 bilateral agreements between each participating institution and expend substantial development
13 costs, including both software and hardware, to support creation of data files in multiple standard
14 formats. Financial institutions which formerly could not exchange financial information which
15 represented physical instruments and/or electronic funds transfers because of dissimilar data file
16 format processing, are now capable of accessing a system which translates their present data file
17 format into one or more standard formats.

18 In the system, a receiving institution is capable of receiving financial instrument information
19 from an originating institution upon demand, based on instructions from the originating institution

1 and within a prearranged time period. A means is also provided which reduces the need for
2 obtaining the physical instrument when reversing a transfer of funds to/from an institution of first
3 deposit.

4 Given the foregoing disclosure, it is evident that the benefits of the present invention may
5 be extended and adapted to numerous types of commercial activities.

6 Although a specific embodiment of the invention has been described herein in detail, it is
7 understood that variations may be made thereto by those skilled in the art without departing from
8 the spirit of the invention or the scope of the appended claims.

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